EXHIBIT 12

US Patent No. 7,769,050

Claim 1	Identification
[1pre] A method for providing wireless communication, the method comprising:	Regardless of whether the preamble is limiting, Defendants perform a method of providing wireless communication. For example, Defendants own, provide, and manage Wi-Fi equipment, such as Access Points. **6.7 Equipment & Software** **6.7.1 Customer Equipment:** Other than the equipment and/or software provided to you by AT&T for use with the Service (collectively, the "AT&T Equipment"), you must provide all equipment, devices, and software necessary to receive the Service. Any equipment or software that was not provided to you by AT&T, including batteries, is not the responsibility of AT&T, and AT&T will not provide support for, or be responsible for ongoing maintenance of such equipment. Regardless of whether the equipment used to access your Service (modem, gateway, etc.) is owned by you or AT&T, AT&T reserves the right to manage such equipment for the duration of your Service, and retains exclusive rights to data generated by the equipment. Neither you nor a third party may change, interfere with, or block access to equipment, the data, or settings while you continue to receive the Service. https://www.att.com/legal/terms.consumerServiceAgreement.html \ **6.7.6 Return of AT&T Equipment:** Except as otherwise provided, AT&T Equipment must be returned to AT&T undamaged, within twenty-one (21) calendar days after your Service is terminated for any reason. If Equipment is not returned within twenty-one (21) calendar days, or is returned damaged, you will be charged a Non-Return Equipment Fee. We may retain any advance payment or deposit, or portion thereof that previously had not been refunded, if you fail to return the AT&T Equipment within this time period. If all AT&T Equipment is returned within six (6) months of termination, any fees charged for such AT&T Equipment will be refunded (other than fees for damages). No refunds will be made for AT&T Equipment returned more than six (6) months after termination. This subsection also applies if your existing Equipment is replaced or upgraded for any reason. https://www.att.com/legal/terms.consumerServiceAgreement.html

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	Such Access Points (such as the BGW320) include Wi-Fi 6 (802.11ax) functionality. 
[1a] providing a plurality of frequency channels in each of	Defendants provide multiple access points, for example, within a multi-family or mixed-use development. Using these access points, Defendants provide a plurality of frequency channels in each of a plurality of portions of a service area.

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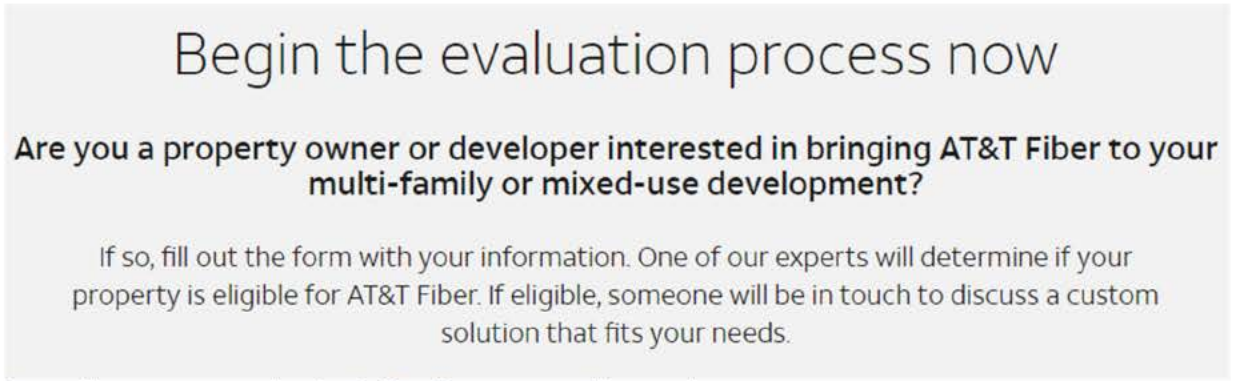
a plurality of portions of a service area,	 https://www.att.com/att/multifamily-property/locator/ **17.3.8.4.2 Channel numbering** Channel center frequencies are defined at every integer multiple of 5 MHz above the channel starting frequency. The relationship between center frequency and channel number is given by Equation (17-27): Channel center frequency = Channel starting frequency + 5 × n_{ch} (MHz) (17-27) where n_{ch} = 1,…200. Channel starting frequency is defined as dot11ChannelStartingFactor × 500 kHz or is defined as 5 GHz for systems where dot11OperatingClassesRequired is false or not defined. For example, dot11ChannelStartingFactor = 10000 indicates that Channel 0 center frequency is 5.000 GHz. A channel center frequency of 5.000 GHz shall be indicated by dot11ChannelStartingFactor = 8000 and n_{ch} = 200. An SME managing multiple channel sets can change the channel set being managed by changing dot11ChannelStartingFactor.

<table>
<tr><th>Claim 1</th><th>Identification</th></tr>
<tr><td></td><td>802.11-2016</td></tr>
<tr><td>[1b] wherein the plurality of frequency channels are in an unlicensed frequency band</td><td>The above frequency channels are in the unlicensed 2.4, 5, or 6 Ghz bands.
<table>
<tr><th colspan="7">Wi-Fi generations V·T·E</th></tr>
<tr><th>Generation</th><th>IEEE standard</th><th>First Approved</th><th>Maximum link rate (Mbit/s)</th><th colspan="3">Radio frequency (GHz)</th></tr>
<tr><td>Wi-Fi 7</td><td>802.11be</td><td>2019-03-21</td><td>1376 to 46120</td><td>2.4</td><td>5</td><td>6</td></tr>
<tr><td>Wi-Fi 6/6E</td><td>802.11ax</td><td>2014-03-27</td><td>574 to 9608</td><td>2.4</td><td>5</td><td>6[1]</td></tr>
<tr><td>Wi-Fi 5</td><td>802.11ac</td><td>2008-09-26</td><td>433 to 6933</td><td>↓[2]</td><td>5</td><td></td></tr>
<tr><td>Wi-Fi 4</td><td>802.11n</td><td>2003-09-11</td><td>72 to 600</td><td>2.4</td><td>5</td><td></td></tr>
<tr><td>(Wi-Fi 3)*</td><td>802.11g</td><td>2000-09-21</td><td rowspan="2">6 to 54</td><td>2.4</td><td></td><td></td></tr>
<tr><td>(Wi-Fi 2)*</td><td>802.11a</td><td>1997-09-16</td><td></td><td>5</td><td></td></tr>
<tr><td>(Wi-Fi 1)*</td><td>802.11b</td><td>1997-12-09</td><td>1 to 11</td><td>2.4</td><td></td><td></td></tr>
<tr><td>(Wi-Fi 0)*</td><td>802.11</td><td>1991-03-21</td><td>1 to 2</td><td>2.4</td><td></td><td></td></tr>
<tr><td colspan="7">*Wi-Fi 0, 1, 2, and 3 are unbranded common usage.[3][4]</td></tr>
</table>
https://en.wikipedia.org/wiki/Wi-Fi_6

3. We authorize two different types of unlicensed operations—standard-power and indoor low-power operations. We authorize standard-power access points using an automated frequency coordination (AFC) system. These access points can be deployed anywhere as part of hotspot networks, rural broadband deployments, or network capacity upgrades where needed. We also authorize indoor low-power access points across the entire 6 GHz band. These access points will be ideal for connecting devices in homes and businesses such smartphones, tablet devices, laptops, and Internet-of-things (IoT) devices to the Internet. As has occurred with Wi-Fi in the 2.4 GHz and 5 GHz bands, we expect that 6 GHz unlicensed devices will become a part of most peoples' everyday lives. The rules we are adopting will also play a role in the growth of the IoT; connecting appliances, machines, meters, wearables, and other consumer electronics as well as industrial sensors for manufacturing.[4]</td></tr>
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	FCC 20-51 at 3.
[1c] wherein a same frequency channel of the plurality of frequency channels is provided for use in two or more adjacent portions of the service area; and	AT&T devices implement the 802.11ax HE spatial reuse operation, in which the same frequency channel of the plurality of frequency channels is provided in two or more adjacent portions of the service area. For example, this is used for different basic service sets (BSS) to operate within a dense environment. Stations (STA) identify whether physical layer protocol data units (PPDUs) originate from within their own BSS when the sets are overlapping. **T.6 BSS color and spatial reuse** The BSS color is an identifier of the BSS and is used to assist a receiving STA in identifying the BSS from which a PPDU originates so that the STA can follow the channel access rules to perform spatial reuse. The objective of spatial reuse operation is to allow the medium to be used more often between OBSSs in dense deployment scenarios by the early identification of signals from OBSSs and interference management. See 26.10. 802.11ax **26.2 HE channel access** **26.2.2 Intra-BSS and inter-BSS PPDU classification** A STA shall classify a received PPDU as an inter-BSS PPDU if at least one of the following conditions is true: — The RXVECTOR parameter BSS_COLOR is not 0 and is not the BSS color of the BSS of which the STA is a member.

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	A STA shall classify the received PPDU as an intra-BSS PPDU if at least one of the following conditions is true: — The RXVECTOR parameter BSS_COLOR of the PPDU carrying the frame is the BSS color of the BSS of which the STA is a member or the BSS color of any TDLS links to which the STA belongs if the STA is an HE STA associated with a non-HE AP. 802.11ax
[1d] mitigating interference associated with external interference sources by making particular channels of the plurality of channels available for use by network nodes disposed in the portions of the service area according to a two tier scheduling strategy,	AT&T mitigates interference associated with external interference sources (which is, for example, the case in a dense deployment scenario) by making particular channels of the plurality of channels available for use by the network nodes according to the two tier scheduling strategy described in limitations [1e] - [1g]. **T.6 BSS color and spatial reuse** The BSS color is an identifier of the BSS and is used to assist a receiving STA in identifying the BSS from which a PPDU originates so that the STA can follow the channel access rules to perform spatial reuse. The objective of spatial reuse operation is to allow the medium to be used more often between OBSSs in dense deployment scenarios by the early identification of signals from OBSSs and interference management. See 26.10. 802.11ax
[1e] wherein a first tier of the scheduling strategy includes assigning the plurality of frequency channels to each portion of the service area at a relatively slow pace;	The first tier of the scheduling strategy is to assign channels at a slow pace, e.g., when the device is set up or when a channel is scanned for interference.

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[1f] wherein a second tier of the scheduling strategy includes allocating the assigned frequency channels resulting from the first tier of the scheduling strategy among the network nodes disposed in each portion of the service area in real-time; and	The second tier of the scheduling strategy is to allocate the assigned frequency channels resulting from the first tier of the scheduling strategy among the network nodes disposed in each portion of the service area in real-time, through the spatial reuse function. Through the spatial reuse operation, frequency channels are allocated by BSS color (marking PPDUs as inter-BSS). An example of OBSS PD SR operation is shown in Figure 26-12. In this example, STA SR S2 — Receives the PPDU from S1 and, if it classifies the PPDU as inter-BSS PPDU, ignores the PPDU using OBSS PD-based spatial reuse with non-SRG OBSS PD, starts the OBSS PD SR transmit power restriction period 1 with TX_PWRmax 1, and decrements its backoff counter until the reception of the PPDU from D1. — Receives the PPDU from D1 and, if it classifies the PPDU as inter-BSS PPDU, ignores the PPDU (if it chooses to do so) using OBSS PD-based spatial reuse with non-SRG OBSS PD, starts the OBSS PD SR transmit power restriction period 2 with TX_PWRmax 2, and decrements its backoff counter until the reception of the PPDU from S1". — Defers during the TXOP S1" set by the intra-BSS PPDU from S1" that belongs to its own BSS and, at the end of the TXOP S1", resumes the decrement of its backoff until the reception of the PPDU from S1'. — Receives the PPDU from S1' and, if it classifies the PPDU as SRG PPDU, ignores the PPDU (if it chooses to do so) using OBSS PD-based spatial reuse with SRG OBSS PD, starts the OBSS PD SR transmit power restriction period 3 with TX_PWRmax 3, and decrements its backoff counter until the counter reaches zero because it does not receive the PPDU from D1'. — Starts transmitting a PPDU with a TX_PWRmax equal to min(TX_PWRmax 1, TX_PWRmax 2, TX_PWRmax 3) and respects this transmit power restriction until the end of the SR TXOP. 802.11ax

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	26.10.3.2 PSR-based spatial reuse initiation An HE STA identifies an PSR opportunity if the following two conditions are met: a) The STA receives a PHY-RXSTART.indication corresponding to the reception of a PSRR PPDU that is identified as an inter-BSS PPDU (see 26.2.2). 802.11ax
[1g] wherein the network nodes are selected for simultaneous use of said particular channels as a function of spatial characteristic groupings of said network nodes.	As a function of the spatial characteristic groupings of said network nodes (i.e., BSS), the network nodes are selected for simultaneous use of particular channels.

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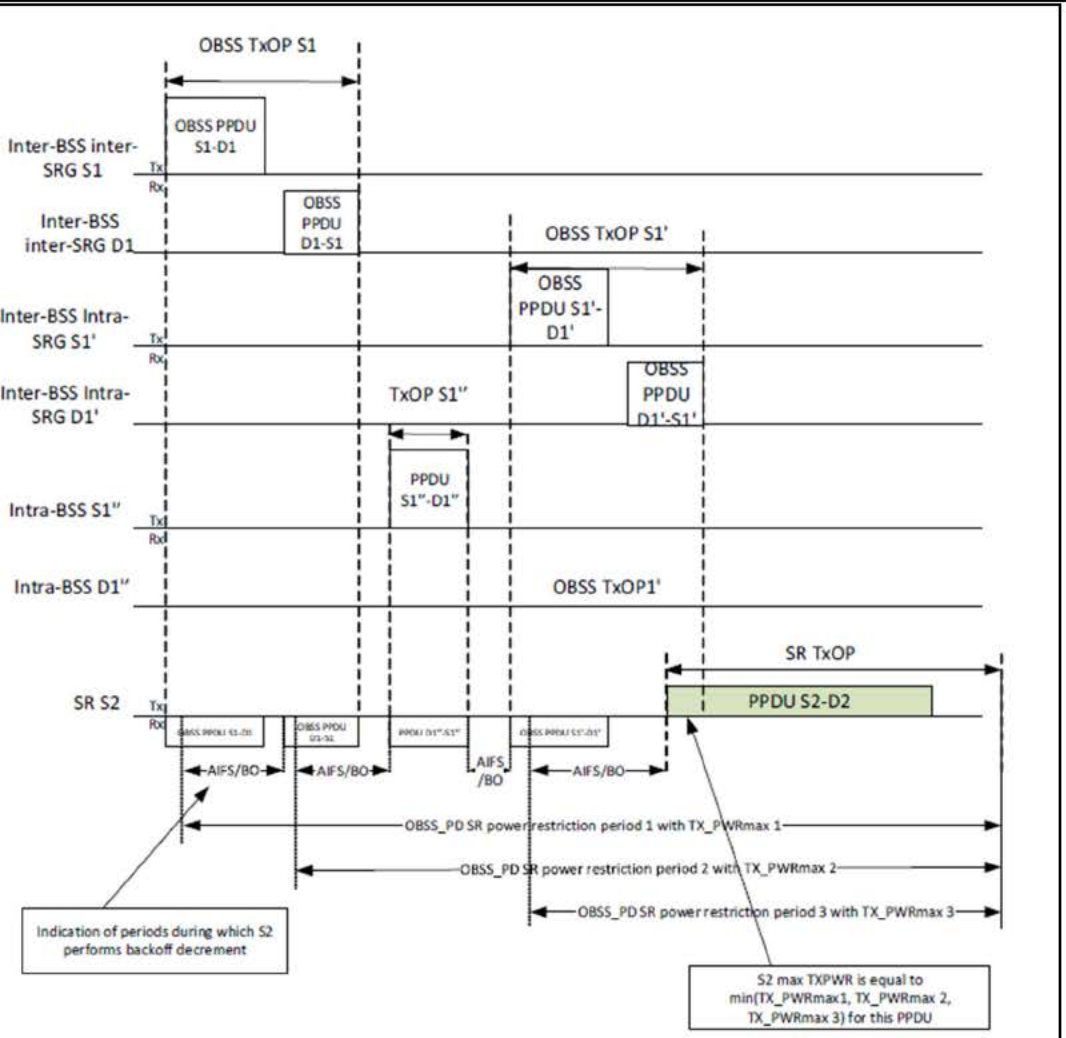

Figure 26-12—Example of OBSS PD SR operation

802.11ax